



Water/Sewer Capital Improvement Plan

George E Elder Park
May 15, 2014



Process to Repair our City

- ◎ **Identify the Need** – Condition of water & sewer system, streets, parks, facilities, etc.
- ◎ **Community Involvement** – Discuss with City Council and community
- ◎ **Prop 218 Process** – Required to inform residents
- ◎ **Proceed with Repairs** – Five year water and sewer Capital Improvement Program (CIP)
- ◎ **Evaluate the Program** – Adjust every 3-5 years must



Proposition 218 Process

- ⦿ Less accountability before Prop 218 (2006)
- ⦿ Must inform property owners and utility customers of proposed rate increases, and allow method to “protest”
- ⦿ Applies to water, wastewater and solid waste fee increases (considered property related)
- ⦿ 16,359 properties in Monterey Park affected
- ⦿ Rate increase may not exceed cost of service and system maintenance by “LAW”



Much Needed **Water & Sewer** Repairs

- ◎ Systems date back to 1920s
- ◎ Was not built for growth
- ◎ Pipeline breaks increasing...sign of aging system
- ◎ Emergency repairs are four times more expensive than scheduled replacements
- ◎ 65% of sewer lines have never been inspected
- ◎ **\$12.8 million in Sewer CIP** identified (anticipated increase after more video inspections)
- ◎ **\$100 million in Water CIP** identified



Water Rate Alternatives

- ◎ **Alternative 1** – (*Conservative*) \$100 million CIP in 12 years with \$42.5 million first 5 years
- ◎ **Alternative 2** – (*Reasonable*) \$100 million CIP in 19 years with \$26.5 million first 5 years
- ◎ **Alternative CC** (*Gradual Increase*)
 - \$100 million CIP in 20 years, \$26.3 million first 5 years
 - Rates increase gradually



Water Rate Comparison-Residential

Water Agency	Existing Bill	Sept 2014	Sept 2015	Sept 2016	Sept 2017	Sept 2018	5 Year CIP
MPK Alternative 1	\$28.82	\$75.01	\$77.26	\$79.58	\$81.97	\$84.42	\$42.5 Million
MPK Alternative 2	\$28.82	\$66.25	\$67.21	\$69.22	\$71.30	\$73.44	\$26.5 Million
MPK Alternative CC	\$28.82	\$50.24	\$60.29	\$70.54	\$79.01	\$85.33	\$26.3 Million
California Water Service (MPK Customers)	\$53.52						
Golden State Water (MPK Customers)	\$54.05						
San Gabriel Water Company	\$55.31						
City of Covina	\$60.71						
City of Alhambra	\$60.71						
City of South Pasadena	\$61.79						

The chart above compares the current and proposed average monthly water bills for single family residential accounts (5/8" and 3/4" meter with 12 units of water consumed each month)



Water Rate Comparison-Commercial

Type of Business	Current Bill	Sept '14 Estimate	Sept '15 Estimate	Sept '16 Estimate	Sept '17 Estimate	Sept '18 Estimate
Drug Store 3/4", 13 units	\$42.03	\$53.85	\$64.58	\$75.58	\$84.56	\$91.38
Church 1 1/2", 114 units	\$313.32	\$355.37	\$426.13	\$498.74	\$557.84	\$602.91
Supermarket 1 1/2", 212 units	\$557.22	\$599.27	\$718.53	\$841.01	\$940.53	\$1,016.59
Hotel 2", 242 units	\$640.38	\$716.91	\$859.62	\$1,006.13	\$1,125.27	\$1,216.23
Apartment 4", 852 units	\$2,246.53	\$2,478.63	\$2,972.01	\$3,778.54	\$3,890.34	\$4,204.85
Restaurant 1", 983 units	\$2,453.41	\$2,482.26	\$2,976.01	\$3,483.41	\$3,894.94	\$4,210.32
Estates HOA 4", 2523 units	\$6,405.23	\$6,637.33	\$7,957.85	\$9,314.51	\$10,415.60	\$11,258.56



What Can You Do? – Conserve Water

Residential

- ◉ Water lawn and gardens less frequently or in cooler morning or evening hours
- ◉ Install low volume toilets and water-saving clothes and dish washers
- ◉ Install “smart” sprinkler controllers, drip irrigation systems, and rotating sprinkler nozzles
- ◉ Landscape with drought-tolerant plants
- ◉ Support efforts to expand water recycling and use of reclaimed water
- ◉ Run only full loads in dish and clothes washers

Commercial

- ◉ Educate employees about importance of water conservation
- ◉ Perform leak survey and water audit
- ◉ Install low-flow toilets and urinals
- ◉ Plant low-water-use grass and plants
- ◉ Utilize more energy dishwashers, ice machines, cooking systems, laundry washers, etc.

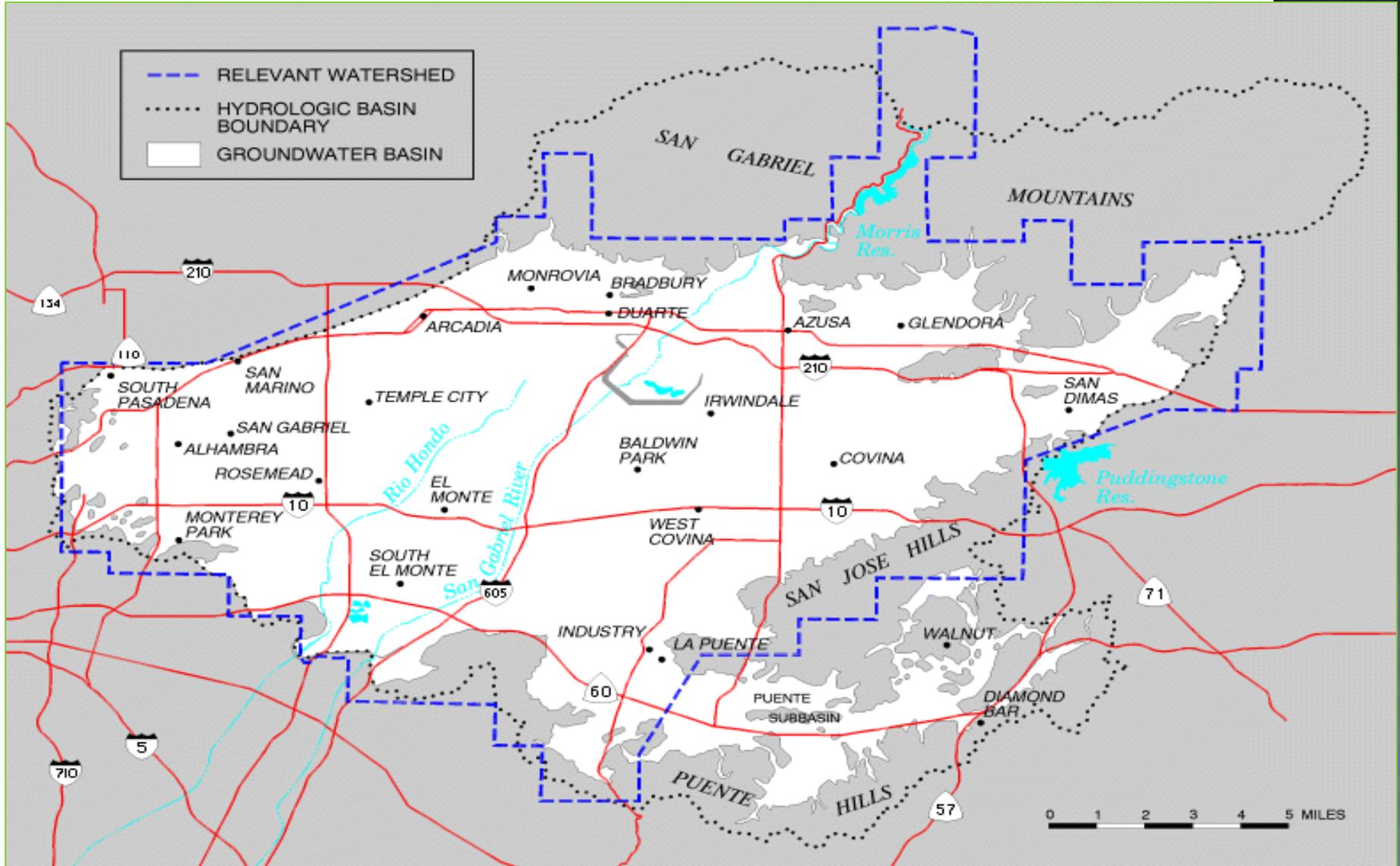


City of Monterey Park

Water System



San Gabriel Ground Water Basin





Complex Water System

- ◎ 12 ground water wells
- ◎ 3 treatment facilities
- ◎ 136.6 miles of 2" - 36" water mains
- ◎ 13 reservoirs with 18.6 million gallons storage
- ◎ 11 booster stations, 13,400 water connections
- ◎ San Gabriel Valley Municipal Water District (SGVMWD)
- ◎ Emergency Connection - San Gabriel Valley Water Company, MWD, California Water Service Company



Water System Demands

- ⦿ Serves 62,500 residents and over 1,500 businesses
- ⦿ Produced 8.6 million gallons on average
- ⦿ Water consumption 7.8 million gallons on average
- ⦿ MPK's water loss is 9%, most water systems average 3-5%
- ⦿ Unaccounted water = loss in revenue



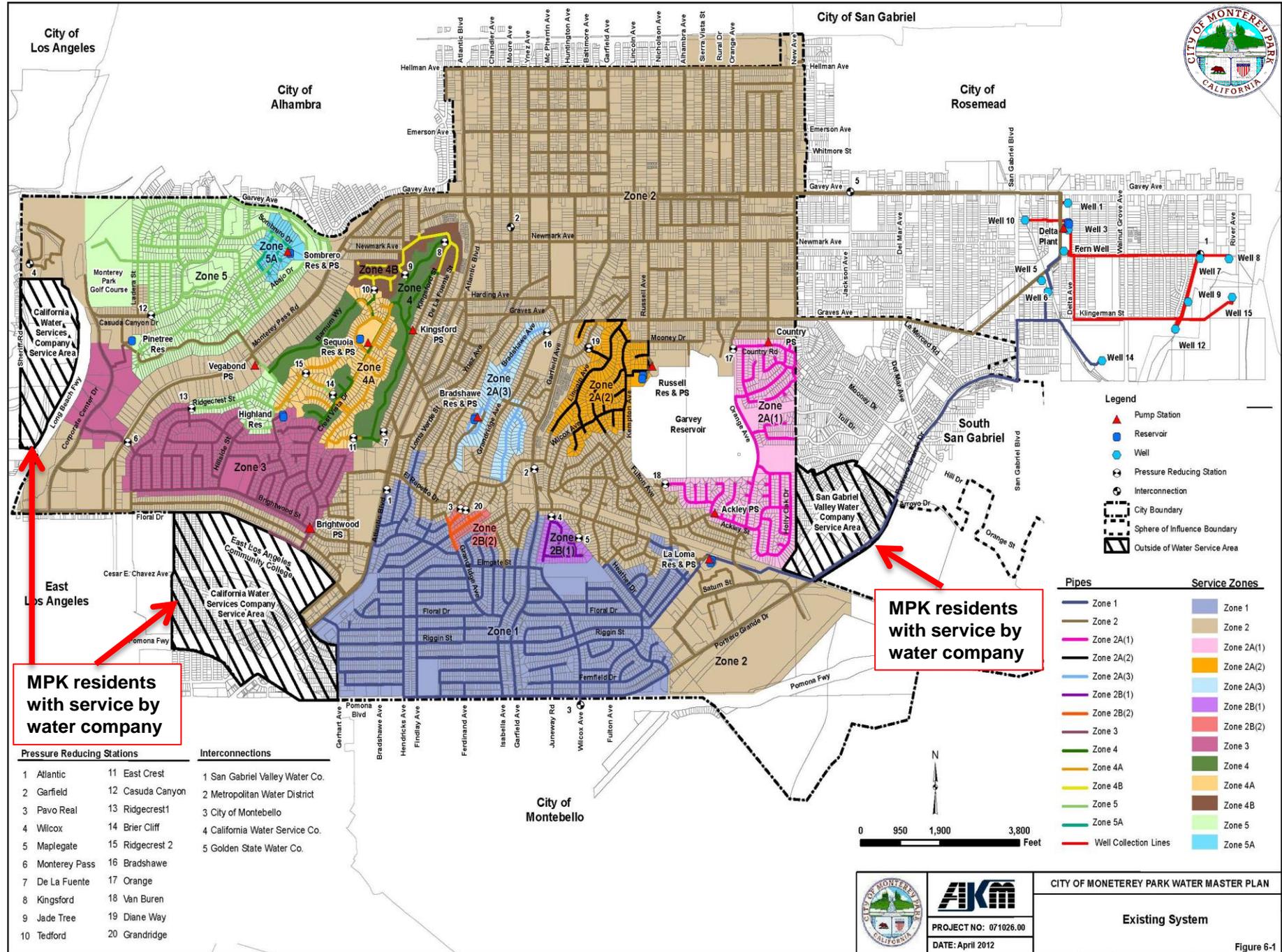
Water System Concerns

- ◎ 72% of pipeline system built before 1960
- ◎ Increase of water main failures 25 to 36 and rising
- ◎ 18 miles of pipeline improvements for fire flow
- ◎ Over 50 miles of pipeline need replacement
- ◎ Inefficient water meters need to be replaced
- ◎ SCADA System – Supervisory Control and Acquisition
- ◎ Reservoir storage concrete re-enforced



\$99.9 million Water CIP

- ◎ \$16.7 million in projects at Delta Booster Station
- ◎ \$5.4 million to replace Pinetree Reservoir
- ◎ \$6.8 million to replace Well 1 & 3
- ◎ Replace 96,000 feet (18.2 miles) of pipe for fire flow improvements
- ◎ Program mitigates emergency repairs
- ◎ Replacement of 11,000 water meters that's reading only 92% of water flow



- Legend**
- ▲ Pump Station
 - Reservoir
 - Well
 - ⊗ Pressure Reducing Station
 - ⊕ Interconnection
 - City Boundary
 - ⋯ Sphere of Influence Boundary
 - ▨ Outside of Water Service Area

Pipes	Service Zones
Blue line	Zone 1
Tan line	Zone 2
Pink line	Zone 2A(1)
Orange line	Zone 2A(2)
Light blue line	Zone 2A(3)
Purple line	Zone 2B(1)
Red line	Zone 2B(2)
Green line	Zone 3
Dark green line	Zone 4
Yellow line	Zone 4A
Light green line	Zone 4B
Light blue line	Zone 5
Dark blue line	Zone 5A
Red line	Well Collection Lines

Pressure Reducing Stations	Interconnections
1 Atlantic	1 San Gabriel Valley Water Co.
2 Garfield	2 Metropolitan Water District
3 Pavo Real	3 City of Montebello
4 Wilcox	4 California Water Service Co.
5 Maplegate	5 Golden State Water Co.
6 Monterey Pass	
7 De La Fuente	
8 Kingsford	
9 Jade Tree	
10 Tedford	
11 East Crest	
12 Casuda Canyon	
13 Ridgecrest1	
14 Brier Cliff	
15 Ridgecrest 2	
16 Bradshawe	
17 Orange	
18 Van Buren	
19 Diane Way	
20 Grandridge	



AKM
PROJECT NO: 071026.00
DATE: April 2012

CITY OF MONTEREY PARK WATER MASTER PLAN

Existing System

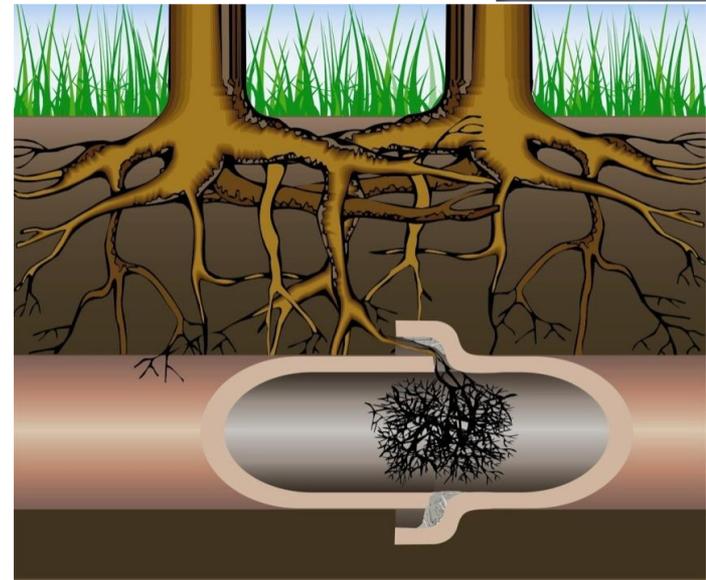


10/11/2005



City of Monterey Park

Sewer System





\$12.8 million Wastewater CIP

- ◎ With only 35% of collection system reviewed, CIP is already \$12.8 million. Video inspection of remaining 65% will increase Wastewater CIP
- ◎ Annual sewer video inspection program
- ◎ \$4.2 million pipeline replacements
- ◎ \$1.5 million spot repairs
- ◎ \$3.9 million cured in place pipe installation
- ◎ \$3.2 million to meet Sewer System Management Program requirements

SEWER UTILITY MAP

CITY OF

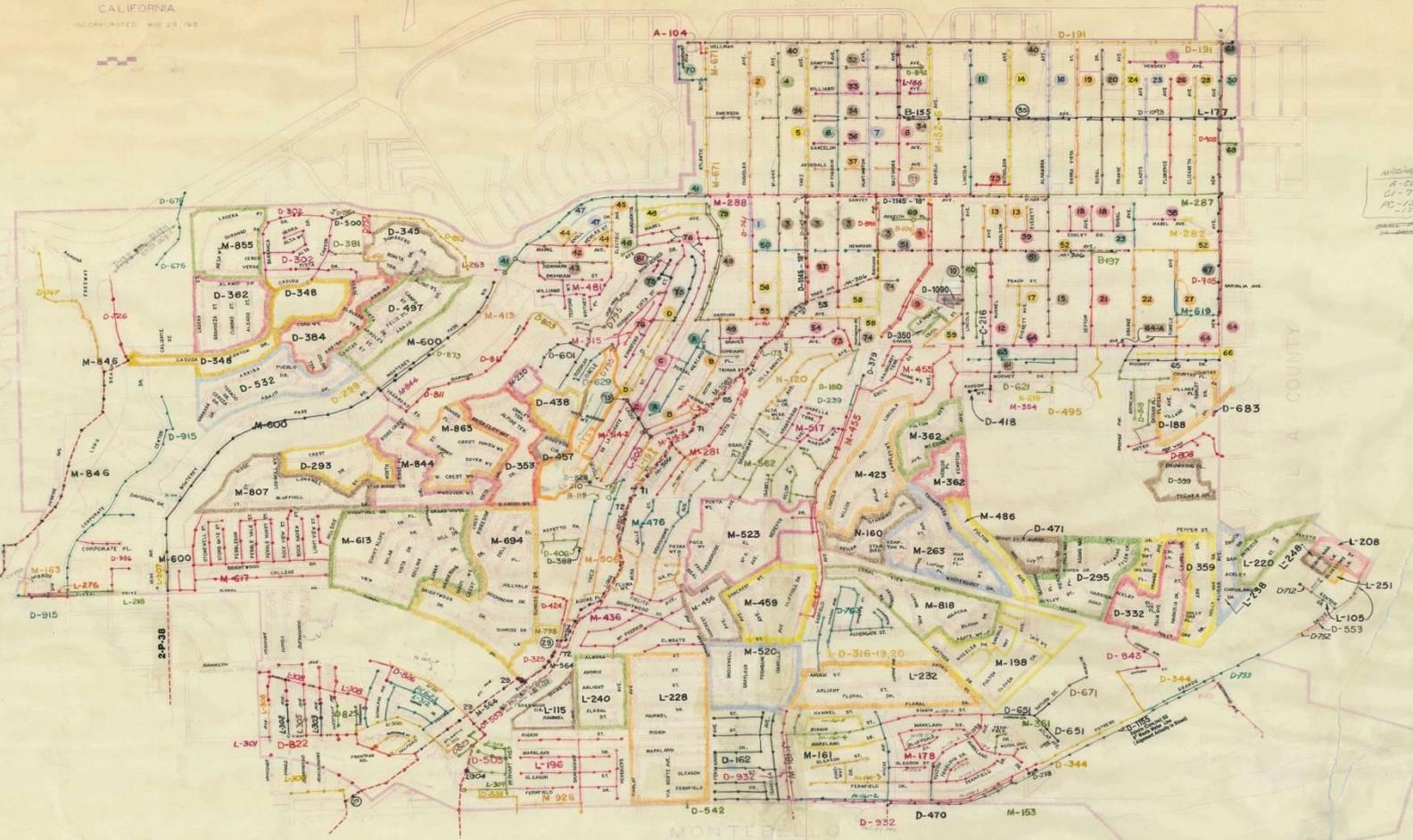
MONTEREY PARK

LOS ANGELES COUNTY
CALIFORNIA

INCORPORATED MAY 29, 1916



ALHAMBRA



ADDITIONAL SHEETS:
7-285
C1-770
PC-1374
1-133

NOTE:
1. THE DRAWING NUMBER AND PROJECT NUMBER ARE LOCATED IN THE NUMBER
2. THE DRAWING NUMBER AND PROJECT NUMBER ARE LOCATED IN THE NUMBER
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L.A. COUNTY SANITATION SEWER SYSTEM

NOTE: Los Angeles County Sanitation District No. 2
is the primary sewer collector for the City of Monterey Park. The City of Monterey Park is connected to the City of Monterey Park LCP Sewer in Alhambra. SEE DWG NO. D-105



Monterey Park Sewer System

- ◎ 126 miles of 6" to 15" sewer mains
- ◎ Transport to trunk lines of L.A. County Sanitation
- ◎ 2,498 access holes, known as manholes
- ◎ Gravity sewer system 250' to 500'



Sewer Break on Emerson





Sewer System Concerns

- ◎ 65% of the system needs inspection
- ◎ Sewer mains over 100 years in service
- ◎ Grease and root intrusion problematic
- ◎ Staffing levels inadequate and equipment needed
- ◎ Inspection of system must be aggressive
- ◎ Accountable sewage to L.A County Sanitation
- ◎ Public outreach F.O.G. Program

65% of Sewer System Never Inspected

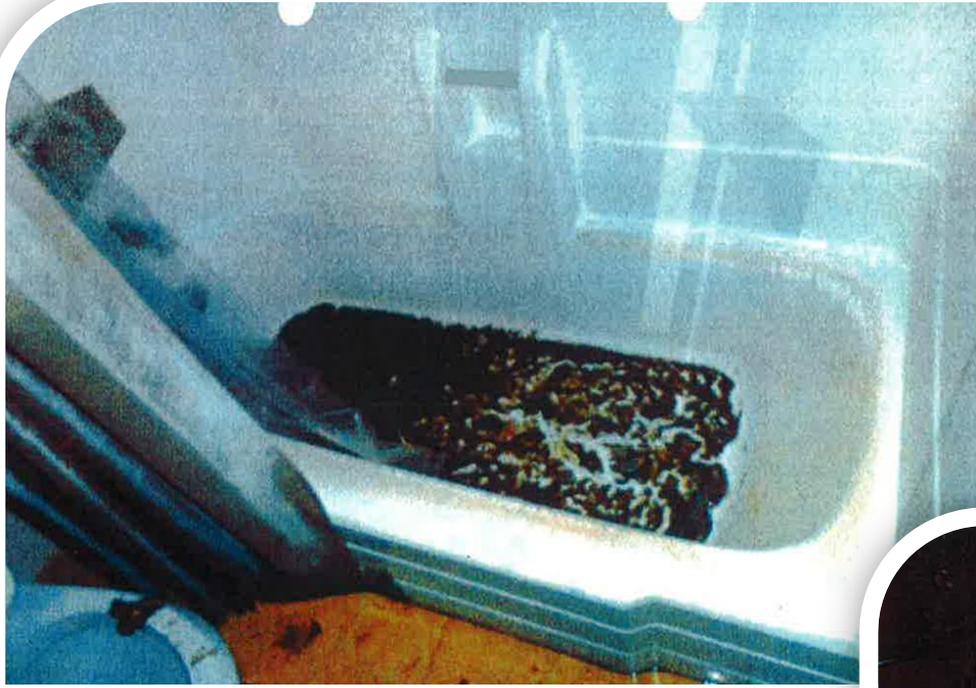




City of Monterey Park

System Damages

Damage – 1870 to 1886 S. Garfield



Damage – 1870 to 1866 S. Garfield





Damage – 99 Ranch Market





Damage – 99 Ranch Market





Grease Blocking Line





Grease and Roots



Sewer Overflow



5 Year Water and Sewer Capital Improvement Plan



5 Year **Water** CIP – \$26.3 Million

Fiscal Year 2014-15 (Year 1)	
Mainline Replacement – Hellman Garfield to New	\$750,200
Mainline Replacement – Emerson from Garfield to New	\$950,400
Mainline Replacement – Garvey from Garfield to New	\$1,451,000
Mainline Replacement – Garfield from Garvey to Hellman	\$910,000
Mainline Replacement – Lincoln from Garvey to Hellman	\$726,100
Total FY 2014-15	\$4,787,700



5 Year Water CIP – \$26.3 Million (cont')

Fiscal Year 2015-16 (Year 2)	
Mainline Replacement – Nicholson from Garvey to Hellman	\$783,700
Mainline Replacement – Alhambra from Garvey to Hellman	\$798,300
Mainline Replacement – Sierra Vista, Garvey to Hellman	\$649,800
Mainline Replacement – Rural from Garvey to Hellman	\$639,300
Mainline Replacement – Orange from Garvey to Hellman	\$610,400
Mainline Replacement – Gladys from Garvey to Alley	\$326,100
Mainline Replacement – Florence from Garvey to Alley	\$327,100
Mainline Replacement – Elizabeth from Garvey to Alley	\$386,000
Mainline Replacement – Hershey from Orange to New	\$312,000
Mainline Replacement – New from Garvey to Hellman	\$740,800
Total FY 2015-16	\$5,573,500



5 Year Water CIP – \$26.3 Million (cont')

Fiscal Year 2016-17 (Year 3)	
Mainline Replacement – Milam from Wilcox to South End	\$120,800
Mainline Replacement – Triana from Fotini to Ynez	\$146,100
Expansion of Air Stripper at Well 5, or Construction of Advanced Oxidation Treatment System at Delta Plant	\$4,050,000
Total FY 2016-17	\$4,316,900

Fiscal Year 2017-18 (Year 4)	
Replace Delta Plant Settling Tanks	\$6,075,000
Total FY 2017-18	\$6,075,000



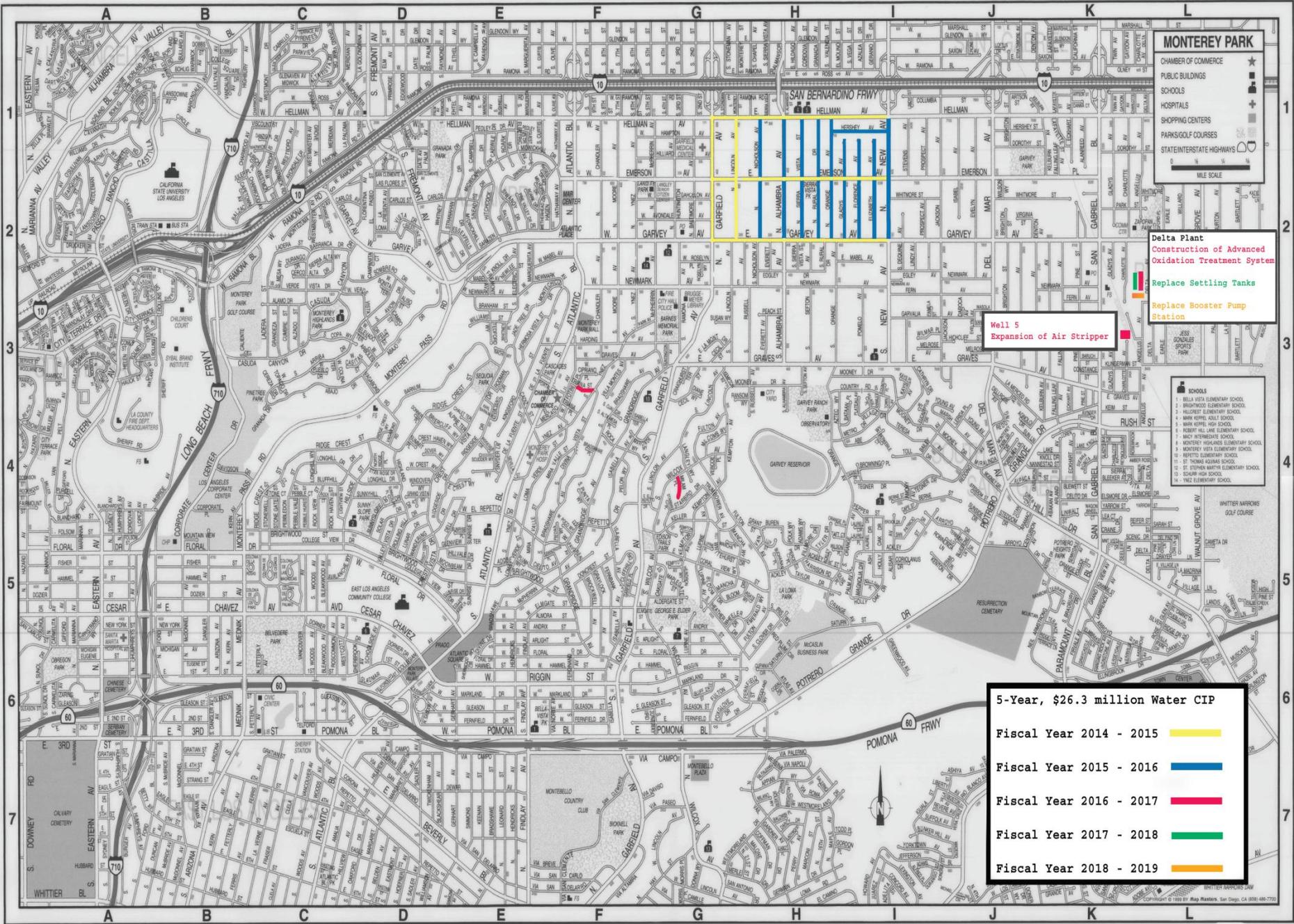
5 Year Water CIP – \$26.3 Million (cont')

Fiscal Year 2018-19 (Year 5)	
Replace Delta Plant Booster Pump Station	\$5,500,000
Total FY 2018-19	\$5,500,000

Additional Projects (Unfunded)	
Mainline Replacement – Garfield from Graves to Coral View	\$1,219,600
Mainline Replacement – Kingsford from Cadiz to Montechico	\$750,000
Mainline Replacement – De La Fuente from Cadiz to Montechico	\$860,000

Note: All projects listed above are subject to change pending any additional assessments, analysis or findings.

CITY OF MONTEREY PARK



MONTEREY PARK

- CHAMBER OF COMMERCE
- PUBLIC BUILDINGS
- SCHOOLS
- HOSPITALS
- SHOPPING CENTERS
- PARKS/GOLF COURSES
- STATE/INTERSTATE HIGHWAYS

Delta Plant
Construction of Advanced Oxidation Treatment System

Replace Settling Tanks

Replace Booster Pump Station

Well 5
Expansion of Air Stripper

- ### SCHOOLS
1. BELLA VISTA ELEMENTARY SCHOOL
 2. BRIGHTWOOD ELEMENTARY SCHOOL
 3. HILLCREST ELEMENTARY SCHOOL
 4. MARK KEPEL ANGLI SCHOOL
 5. MARK KEPEL HIGH SCHOOL
 6. ROBERT W. LANE ELEMENTARY SCHOOL
 7. WACH INTERMEDIATE SCHOOL
 8. MONTEREY WETA ELEMENTARY SCHOOL
 9. HOPKINS ELEMENTARY SCHOOL
 10. ST. THOMAS AQUINAS SCHOOL
 11. ST. STEPHEN MARTYR ELEMENTARY SCHOOL
 12. SCHOEN HIGH SCHOOL
 13. THEZ ELEMENTARY SCHOOL

5-Year, \$26.3 million Water CIP

- Fiscal Year 2014 - 2015
- Fiscal Year 2015 - 2016
- Fiscal Year 2016 - 2017
- Fiscal Year 2017 - 2018
- Fiscal Year 2018 - 2019



5 Year Sewer CIP – \$12.8 Million

Fiscal Year 2014-15 (Year 1)	
Pipeline Replacement – Gladys from Emerson to End of Street	\$228,400
Pipeline Replacement – Briarcliff Way	\$67,000
Pipeline Replacement – Alpine Terrace	\$96,700
Annual CCTV Sewer Videotaping	\$221,800
Spot Repairs – Various Locations	\$377,400
Cured-in-Place Pipe Relining – Various Locations	\$569,300
FOG Program Expansion	\$115,000
CCTV System Expansion	\$345,000
Update Emergency Overflow Response Plan	\$17,300
Allowance for Regular “Hot Spot” Maintenance	\$230,000
Total FY 2014-15	\$2,268,100



5 Year Sewer CIP – \$12.8 Million (cont')

Fiscal Year 2015-16 (Year 2)	
Pipeline Replacement – Grandridge	\$333,600
Annual CCTV Sewer Videotaping	\$221,800
Spot Repairs – Various Locations	\$365,000
Cured-in-Place Pipe Relining – Various Locations	\$570,400
Upgrade Field Equipment	\$57,500
Staff Training (CMMS and GIS)	\$11,500
Allowance for Regular “Hot Spot” Maintenance	\$230,000
Annual Allowance for Pipeline Repairs found by CCTV work	\$810,000
Total FY 2015-16	\$2,599,800



5 Year Sewer CIP – \$12.8 Million (cont')

Fiscal Year 2016-17 (Year 3)	
Pipeline Replacement – Chandler	\$115,600
Annual CCTV Sewer Videotaping	\$221,800
Spot Repairs – Various Locations	\$385,700
Cured-in-Place Pipe Relining – Various Locations	\$567,700
Develop Sewer Atlas Map Book	\$115,000
Allowance for Regular “Hot Spot” Maintenance	\$230,000
Annual Allowance for Pipeline Repairs found by CCTV work	\$810,000
Total FY 2016-17	\$2,445,800



5 Year Sewer CIP – \$12.8 Million (cont')

Fiscal Year 2017-18 (Year 4)	
Pipeline Replacement – Emerson	\$474,000
Annual CCTV Sewer Videotaping	\$221,800
Spot Repairs – Various Locations	\$373,300
Cured-in-Place Pipe Relining – Various Locations	\$794,600
Allowance for Regular “Hot Spot” Maintenance	\$230,000
Annual Allowance for Pipeline Repairs found by CCTV work	\$810,000
Total FY 2017-18	\$2,903,700

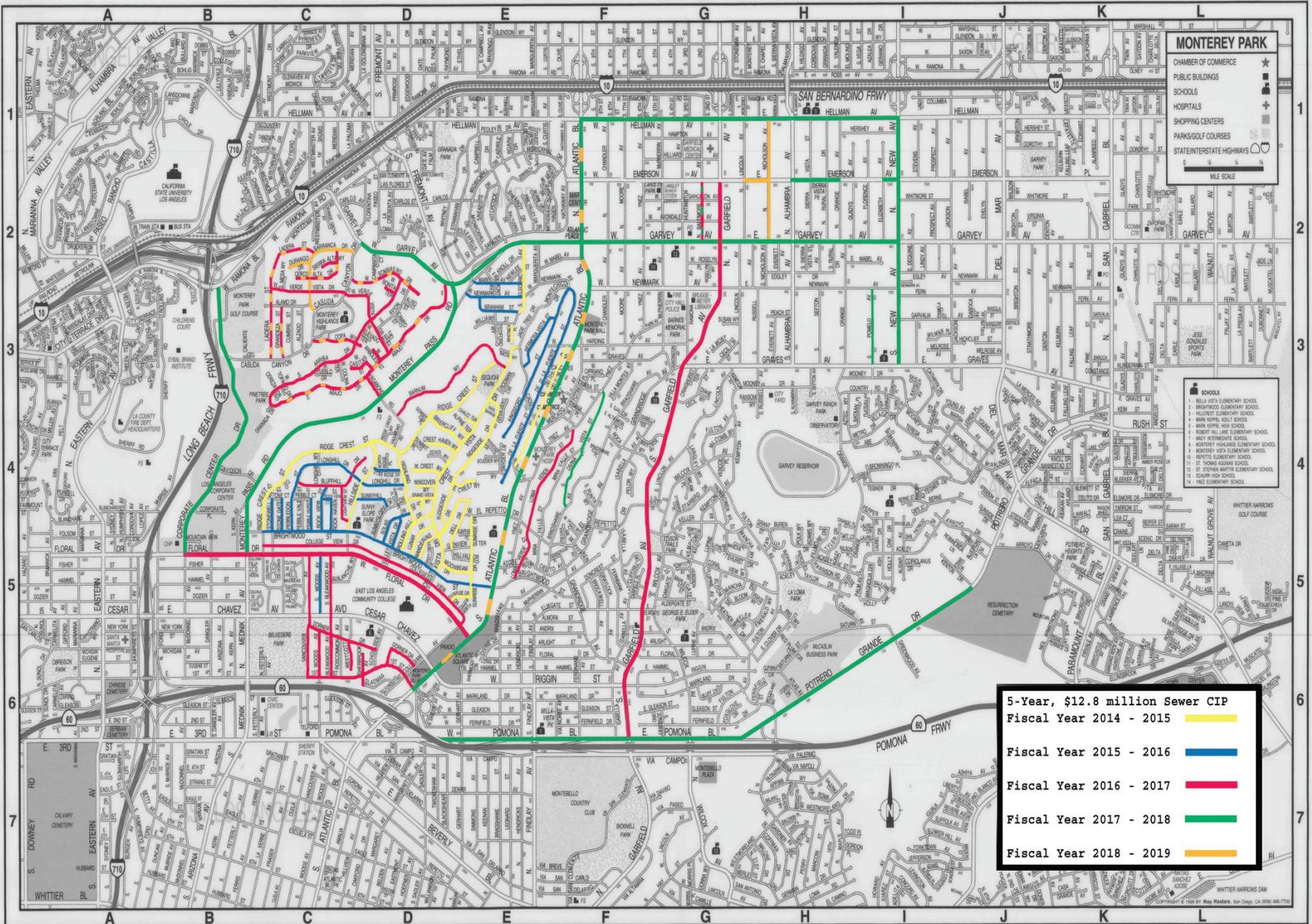


5 Year Sewer CIP – \$12.8 Million (cont')

Fiscal Year 2018-19 (Year 5)	
Pipeline Replacement – Easement	\$247,900
Pipeline Replacement – Emerson	\$176,800
Annual CCTV Sewer Videotaping	\$221,800
Cured-in-Place Pipe Relining – Various Locations	\$732,400
Geographic Positioning Survey	\$115,000
Allowance for Regular “Hot Spot” Maintenance	\$230,000
Annual Allowance for Pipeline Repairs found by CCTV work	\$810,000
Total FY 2018-19	\$2,533,900

Note: All projects listed above are subject to change pending any additional assessments, analysis or findings.

CITY OF MONTEREY PARK



MONTEREY PARK

- CHAMBER OF COMMERCE ★
- PUBLIC BUILDINGS ■
- SCHOOLS □
- HOSPITALS +
- SHOPPING CENTERS ○
- PARKS/GOLF COURSES ○
- STATE/INTERSTATE HIGHWAYS ○

MILE SCALE

SCHOOLS

1. BELLA VISTA ELEMENTARY SCHOOL
2. BRIDGWOOD ELEMENTARY SCHOOL
3. ALLESTREE ELEMENTARY SCHOOL
4. MARK KAPPEL KAPPEL SCHOOL
5. BANK KAPPEL HIGH SCHOOL
6. ROBERT W. LANE ELEMENTARY SCHOOL
7. MICK INTERMEDIATE SCHOOL
8. MONTEREY HIGH LAKE ELEMENTARY SCHOOL
9. MONTEREY WASH ELEMENTARY SCHOOL
10. MONTEREY WASH ELEMENTARY SCHOOL
11. ST. THOMAS ADAMAS SCHOOL
12. ST. THOMAS ADAMAS SCHOOL
13. SISKIYOU HIGH SCHOOL
14. TRIZ ELEMENTARY SCHOOL

5-Year, \$12.8 million Sewer CIP

Fiscal Year 2014 - 2015 █

Fiscal Year 2015 - 2016 █

Fiscal Year 2016 - 2017 █

Fiscal Year 2017 - 2018 █

Fiscal Year 2018 - 2019 █

Solid Waste Concerns

- ◎ Athens contract expires August 2017
- ◎ Trash rates have not increased since 2009
- ◎ FY 2014-15 Operating Expenses (\$6.8 million) exceed Revenues (\$5.8 million) by \$1.0 million



Questions?